

The included VST Instruments



MUSIC CREATION AND PRODUCTION SYSTEM



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VB-1 Bass Synth



The VB-1 is a virtual bass instrument built on real-time physical modeling principles. It has the following properties:

- VB-1 is polyphonic with up to 4 voices.
- VB-1 receives MIDI In Omni mode (on all MIDI channels).
You don't need to select a MIDI channel to direct MIDI to the VB-1.
- VB-1 responds to the following MIDI messages:
MIDI Note On/Off (velocity governs volume), Volume and Pan.

VB-1 Parameters

| Parameter | Description |
|-----------|--|
| Pick-up | To change the Pick-up position, click and drag the lower end of the Pick-up. Positioning the pick-up position towards the left produces a hollow sound that emphasizes the upper harmonics of the plucked string. When placed towards the right position, the tone is fuller and warmer. |
| Pick | This determines where along the length of the string the initial pluck is made. This controls the "roundness" of the tone, just like on a real bass. Click-drag the Pick to change position. |
| Shape | This knob selects the basic waveform used to drive the plucked string model. This parameter can drastically change the sound character. The control smoothly morphs through the waves. It is possible to create sounds that have no relation to a bass guitar with this control. |
| Volume | This knob regulates the VB-1 volume. |
| Damper | This parameter controls the length of time the string vibrates after being plucked. |

LM-7 Drum Machine

Volume and Tune faders
(for each drum sound).

This adjusts the Pan (the position in the stereo image) for the individual drums. The setting is applied to the currently selected drum, indicated by a lit yellow LED over the Pad button.



This sets the global velocity sensitivity for LM-7.

Master Volume

Pad (one for each drum sound). Press to audition the drum sound assigned to the Pad, or to select a sound for adjusting pan.

The LM-7 is a 24-bit drum machine. It has the following properties:

- LM-7 is polyphonic with up to 12 voices.
- LM-7 receives MIDI in Omni mode (on all MIDI channels).
You don't need to select a MIDI channel to direct MIDI to LM-7.
- LM-7 responds to the following MIDI messages:
MIDI Note On/Off (velocity governs volume).

LM-7 Parameters

| Parameter | Description |
|----------------|--|
| Velocity | This sets the global velocity sensitivity for LM-7. The higher the value, the more sensitive LM-7 will be to incoming velocity data. If set to "0", the sounds will play back with a fixed velocity value. |
| Volume sliders | The volume sliders are used to adjust the volume for each individual drum sound. |
| Tune sliders | The tune sliders are used to tune each individual drum sound, up or down 1 octave. |
| Pad | The Pads are used for two things: To audition the individual drum sounds, and to select a sound for adjusting pan. |
| Panorama | This is used to position an individual sound in the stereo image. The setting applies to the currently selected sound, indicated by a lit yellow LED over the Pad button. |

Drum sounds

LM-7 comes with six sets of drum sounds. "Compressor", "909" and "Percussion" are loaded as the default sets when launching LM-7. "Modulation", "Fusion" and "DrumNbass" can be loaded by selecting "Load Bank" from the File menu and opening the lm7_second_set.fxb file (which is located in the Vstplugins/Drums subfolder).

- You switch between the three loaded sets by using the pop-up menu (just like you switch between effect programs).

MIDI note mapping

The table below shows how the drum sounds are assigned to note values on your MIDI keyboard. The mapping is GM compatible:

| Drum sound | Note | Comment |
|------------|------|------------------|
| Bd | C1 | |
| Rim | C#1 | Compressor only. |
| Snare | D1 | |
| Clap | D#1 | 909 only. |
| Hi-Hat | F#1 | |
| O-Hi-Hat | A#1 | |
| Tom 1 | A1 | |
| Tom 2 | B2 | |
| Tom 3 | D2 | |
| Crash | C#2 | |
| Ride | D#2 | Compressor only. |
| Tambourine | F#2 | Percussion only. |
| Cowbell | G#2 | Percussion only. |
| Hi Bongo | C3 | Percussion only. |
| Lo Bongo | C3# | Percussion only. |
| Conga Mute | D3 | Percussion only. |
| Conga Open | D#3 | Percussion only. |
| Conga Lo | E3 | Percussion only. |
| Timbale Lo | G3 | Percussion only. |
| Timbale Hi | G#3 | Percussion only. |
| Cabasa | A3 | Percussion only. |

Universal Sound Module (USM)



The USM is a General MIDI compatible sound module. General MIDI (GM) is a standard set up by the MIDI Manufacturers Association (MMA) and the Japanese MIDI Standards Committee (JMSC).

It defines a standardized group of sounds and the minimum requirements for General MIDI compatible synthesizers or sound modules, so that a specially prepared sequence or MIDI file that is sent to the instrument via MIDI will play back the correct sound types, regardless of make and model of the instrument.

MIDI identifies sounds by their program change number. Before the General MIDI standard was introduced, the same MIDI program change number often addressed totally different *types* of sound in any two synthesizers or sound modules from different manufacturers, e.g. a flute type sound in one instrument and a piano type sound in the other.

With the introduction of General MIDI standard compatible instruments this changed. These instruments use the same program change numbers for the same *types of instruments*.

So, if the person that prepared a sequence or MIDI file wants the melody to be played by a “piano”, he can use a certain program change command embedded into the sequence to automatically select a piano sound in any GM compatible sound module. The GM standard, however, does not specify in great detail how that piano should sound. It is simply assumed that the manufacturer reproduces an acoustic piano within the capabilities of the instrument. A consequence of this was that, depending on the GM module used, a song would sound very different, even though the instrument sounds were mapped correctly.

This problem is solved by the Universal Sound Module! Cubase users can make sure that their music created using the USM will sound *exactly* the same when played back on another computer, because the sound reproduction is no longer hardware based.

- The USM features over 70 MB of sampled waveforms and four stereo outputs.
- The USM is polyphonic with up to 96 voices.
- The USM receives MIDI in 16 channel Multi mode (simultaneous multi-timbral playback on 16 MIDI channels).
In other words, one USM unit can play up to 16 MIDI Tracks, each with a different sound.
- The USM responds to the following MIDI messages:
MIDI Note On/Off (velocity governs volume).
Volume.
Pan.
Pitch Bend (up to ± 12 semitones).
Modulation (vibrato).

Selecting Sounds

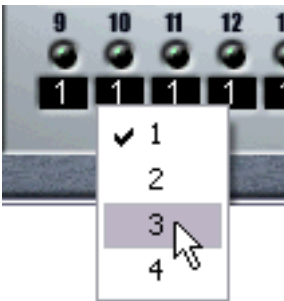
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- ☐ **According to the General MIDI Standard, MIDI channel 10 is reserved for drums. This can not be changed.**
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The USM features 128 different sound patches. Selecting programs is done by sending program change messages by selecting an option from the program ("prg:") pop-up menu in the Inspector.

Selecting Outputs

The USM features four stereo outputs, allowing for flexible routing of sounds to different effect processors etc. By default, all MIDI channels are routed to USM stereo output “1”.

- To select another output, click the “Output” field below the Channel Activity indicator for the MIDI channel you wish to direct to another output.



This opens a pop-up allowing you to select one of the four stereo outputs.

USM Parameters

| Parameter | Description |
|--|--|
| Master Volume | Sets the master output volume for the USM. |
| Pitchb. Range | Sets the range for incoming Pitchbend messages (selectable between 1 to 12 semitones). |
| LFO Speed | Governs the speed of the vibrato. The vibrato depth is controlled via MIDI Modulation messages (for example, using the Mod Wheel on your MIDI controller). |
| MIDI channel activity indicators 1-16. | These light up to indicate activity on the corresponding MIDI channel. |
| Output 1-16 | Clicking in this field opens a pop-up allowing you to direct the corresponding USM MIDI channel to one of the four available stereo outputs. |